

## **An Inter-Agency Approach for Determining Regional Land Cover in the American Southwest: The Southwest Regional Gap Analysis Project**

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The Gap Analysis Program (GAP) is a national inter-agency program that maps the distribution of plant communities and selected animal species and compares these distributions with land stewardship to identify biotic elements at potential risk of endangerment. The GAP uses remote sensing (Landsat 7) and Geographic Information System (GIS) technology to assemble and view large amounts of biological and land management data to identify areas (gaps) where conservation efforts may not be sufficient to maintain diversity of living natural resources. Historically, the GAP has been conducted by individual states; however, this has resulted in inconsistencies in mapped distributions of vegetation types and animal habitat across state lines because of differences in mapping and modeling protocols. This was further compounded from the lack of a national vegetation classification nomenclature. In response to these limitations, the GAP embarked on a second-generation effort to conduct the program at a regional scale using (1) a vegetation classification scheme applicable across the U.S., (2) ecoregional units as the basis for segmenting the landscape into manageable units, and (3) inter-agency investigator teams with land cover analysis and environmental protection expertise. The program's first formalized multi-state effort includes five Southwestern states (AZ, CO, NV, NM, UT), which comprise nearly one-fifth of the conterminous United States (<http://www.epa.gov/nerlesd1/land-sci/gap.htm>).

Although this work was reviewed by the U.S. Environmental Protection Agency and approved for publication, it may not necessarily reflect official Agency policy.